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Patient Expectations of Bariatric and Body Contouring Surgery

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Background: Patient expectations are important in bariatric and body contouring surgery because the goals include improvements in health-related quality of life, appearance, and body image. The aim of this study was to identify patient expectations along the weight loss journey and/or body contouring surgery.

Methods: This qualitative study took an interpretive description approach. Between September 2009 and February 2012, 49 patients were interviewed postbody contouring surgery. Data were analyzed using a line-by-line approach whereby expectations were identified and labeled as expected, unexpected, or neutral. Constant comparison was used to ensure coding was done consistently. Interviews continued until no new themes emerged.

Results: Participants described expectations according to appearance, health-related quality of life, and patient experience of care. Two areas stood out in terms of unmet expectations and included appearance and physical health, ie, recovery from body contouring surgery. Most participants, who underwent bariatric surgery, expected neither the extent of excess skin after weight loss nor how the excess skin would make them look and feel. For recovery, participants did not expect that it would be as long or as hard as it was in reality.

Conclusions: A full understanding of outcomes and expectations for this patient population is needed to enhance patient education and improve shared medical decision making. Education materials should be informed by the collection of evidence-based patient-reported outcome information using measures such as the BODY-Q. A patient-reported outcome scale measuring patient expectations is needed for obese and bariatric patients. (*Plast Reconstr Surg Glob Open* 2016;4:e694; doi: 10.1097/GOX.0000000000000677; Published online 25 April 2016.)

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Body contouring surgery is a rapidly growing area in plastic surgery. According to the American Association of Plastic Surgeons, in 2014, a total of 44,935 body contouring procedures were performed after massive weight loss.¹ The increasing number of people undergoing bariatric surgery has raised the demand for body contouring procedures to remove excess skin and fat associated with massive weight loss.^{2–7} Patient expectations are important in body contouring surgery because the goals include improvements in health-related quality of life (HR-QOL), change in appearance, and reestablishment of body image.^{8,9}

The correlation between patient expectations and surgical outcomes has been studied across different health conditions. Waljee et al¹⁰ recently published a systematic review of patient expectations and patient-reported outcome (PRO) in surgery. They identified 60 studies of patient expectations using a variety of methods: 10 studies used previously validated scales, 15 studies used qualitative methods, 27 studies used ad hoc surveys, and 8 studies used modified outcome surveys. Within bariatric surgery, they identified 1 study by Zijlstra et al¹¹ concerning patient expectations of gastric banding. Zijlstra et al found that the surgically induced effects of weight loss and short-term weight loss maintenance were achieved independently of patient preoperative expectations and postoperative satisfaction with the psychosocial outcomes. No studies concerning patient expectations and body contouring surgery were identified.¹⁰ Subsequently, we have identified a study by Kitzinger et al concerning patient expectations of body contouring surgery. Kitzinger et al performed a questionnaire survey including 252 patients and reported that patient expectations included improvement in appearance, self-confidence, and quality of life. The authors suggest that these concerns represent areas that should be discussed preoperatively with patients by educated members of the healthcare team to ensure that they have realistic and appropriate expectations of the outcomes.⁶ Having appropriate expectations for recovery and changes in health have also, in other areas of surgery, been found to be associated with satisfaction and HR-QOL outcomes after surgery.^{12–23} In fact, a study of hip replacement showed that when patient expectations were met, it was more predictive of satisfaction with outcome than was a successful operation.¹² Conversely, unmet or unrecognized preoperative expectations have been found to be associated with postoperative dissatisfaction with the outcome of surgery.^{19–23}

Waljee et al¹⁰ call for future studies that examine patient expectations and argue that identifying the factors that influence expectations will enhance the understanding of the complex relationship between

patient perception and postoperative recovery. Our team previously conducted a qualitative study to identify the health and aesthetic outcomes associated with obesity and bariatric and body contouring surgery.²⁴ With 63 participants, the qualitative findings were used to develop a conceptual framework composed of 3 major concepts: appearance, HR-QOL, and experience of care, with associated subthemes covering a range of outcomes.²⁵ This study extends this research by exploring patient expectations in relation to each of these 3 major concepts. The specific aim of our study was to identify patient expectations and to categorize these as either expected or unexpected. Identification of patient expectations is valuable to healthcare providers for developing material that can be used in the context of patient education and shared decision making.

METHODS

Theoretic Approach

We started our research by developing a conceptual framework and preliminary set of PRO scales²⁵ using an applied health services research qualitative approach called interpretive description. This qualitative approach presumes that there is theoretic knowledge, clinical knowledge, and a scientific basis informing a study.²⁶

Participants

Between September 2009 and February 2012, patients were recruited from 5 plastic surgery offices in Canada and the United States. Of our original sample of 63 patients, 49 patients were postbody contouring surgery patients and were the focus of this article. The methods and results for this study are reported in detail elsewhere.^{24,25} Briefly, participants were interviewed if the following criteria were met: aged 18 years or older, English speaking, and had undergone at least 1 body contouring procedure no more than 7 years before the interview.

Procedure

Before initiating the study, approval from the research ethics board was obtained. Participants were approached by a member of the plastic surgeon's office staff either by telephone or in person. For those who agreed to participate, time and location for the interview was fixed with a research team member by telephone. Participants were provided with a \$50 gift card to thank them for their time.

Data Collection and Analysis

Before the interview, informed consent was obtained. Our research team included plastic surgeons, psychologists, and qualitative researchers. A researcher

with a Masters degree and experience in interviewing plastic and reconstructive surgery patients performed the interviews. Interviews were conducted at a preferred location as requested by the participant or at the surgeon's office. The interviews began with having participants talk broadly about their appearance, HR-QOL, and experience of care before and after surgery. Participants were asked to talk about their expectations both in relation to their weight loss journey and body contouring. All interviews were digitally recorded and transcribed verbatim with all identifiable information excluded from interview transcripts. An inductive analysis was performed using line-by-line coding²⁷ whereby expectations were identified and labeled to identify major and minor themes. In addition, each expectation was categorized from the research team's perspective to reflect the following¹: expected,² unexpected,³ or neutral (neither expected nor unexpected). An expectation was categorized as expected when the participant considered it fulfilled and as unexpected when the participant indicated it was not expected. Although the unexpected codes are the most interesting from a clinical point of view, we did a second level of coding to categorize the unfulfilled expectations as positive or negative in nature. Hereby, the unexpected codes were classified as positive, negative, or neutral (neither positive nor negative). Finally, expectations were examined separately for the bariatric and body contouring surgery experiences. Codes and subcodes were developed with discussions and input from the research team. Throughout the process, constant comparison was done to ensure all coding was done consistently and to develop the themes and subthemes. Interviews continued until no new themes emerged.

RESULTS

Table 1 shows sample characteristics. The sample included 46 women and 3 men; 13 participants were cosmetic body contouring patients and 36 were post-bariatric weight loss patients.

The analysis revealed patient expectations for appearance, HR-QOL, and experience of care. The number of codes generated from the qualitative data (N = 1111), by subtheme alongside illustrative quotes, is outlined in **Supplemental Digital Content 1**, <http://links.lww.com/PRSGO/A191>. Figure 1 shows the total number of codes by each health concept by whether the expectation was expected, unexpected, or neutral. Below we describe the findings for each theme.

Appearance-Related Expectations

For appearance-related concerns, the subgroup of bariatric surgery patients expected to have a much smaller body size at the end of the process, which

many achieved. An important finding related to the excess skin that is often associated with weight loss in this group. Although most participants were told to expect to have some excess skin, the majority was not prepared for how excessive and extensive the skin would be and experienced it as a negative consequence of weight loss. Many participants were hopeful that their skin would retract, which is mostly an unrealistic expectation after weight loss after bariatric surgery.^{6,28}

Because of excess skin, many participants were surprised and disappointed to find that even though they had lost weight, they were not able to wear certain clothes because of how the excessive skin affected their shape. Several participants stated that had they known the consequences of excess skin on their HR-QOL in advance and/or that they may not be able to obtain body contouring surgery to remove excess skin, they may have chosen not to have bariatric surgery.

For body contouring surgery, most participants tended to be happy with their appearance and how it changed after surgery. Almost half of the codes (see Fig. 1) related to an unmet expectation. Although at times these unmet expectations were negative (eg, scars being longer than expected), most of the time the unmet expectations were positive (eg, looking younger than expected). Almost all participants described their expectations for how they wanted to look after body contouring surgery. Many participants were happily surprised to find that they had a new body shape and size and were able to choose clothes that they wanted to wear.

Another important finding related to expectations involving body contouring scars. Most participants did not expect how extensive the scarring that comes with body contouring surgery would be, and even though some participants simultaneously expressed that they were happy to exchange the skin for scars, the majority of participants expressed that they were disappointed when they first saw their scars. Other appearance-related concerns included the appearance of their navel and stretch marks.

HR-QOL Expectations

Most participants discussed their expectations in terms of HR-QOL outcome. Most of the codes (see Fig. 1) related to an unmet expectation about their physical health, but psychological and social health concerns also came up. Overall, the majority of unmet HR-QOL expectations were described as negative.

Physical Health-Related Expectations

Participants described expectations related to weight loss, physical function, and recovery from body contouring surgery.

Table 1. Sample Characteristics

| Characteristic | Overall (N = 49) | Postbariatric Weight Loss Patients (N = 36) | Cosmetic Patients (N = 13) |
|-----------------------------------|---------------------|--|-------------------------------|
| Age (y) | | | |
| Mean | 47 | 47 | 47 |
| Range | 23–68 | 23–68 | 23–66 |
| Sex, N (%) | | | |
| Female | 46 (94) | 33 (67) | 13 (27) |
| Male | 3 (6) | 3 (6) | 0 (0) |
| Marital status, N (%) | | | |
| Married/common law | 23 (47) | 16 (33) | 7 (14) |
| Other | 24 (49) | 19 (39) | 5 (10) |
| Not reported | 2 (4) | 1 (2) | 1 (2) |
| Highest level of education, N (%) | | | |
| High school | 4 (8) | 3 (6) | 1 (2) |
| College/university diploma | 37 (76) | 27 (55) | 10 (20) |
| Not reported | 8 (16) | 6 (12) | 2 (4) |
| Employment status, N (%) | | | |
| Employed | 24 (49) | 18 (37) | 6 (12) |
| Other | 19 (39) | 15 (31) | 4 (8) |
| Not reported | 6 (12) | 3 (6) | 3 (6) |
| Household income, N (%) | | | |
| <\$40,000 | 9 (18) | 7 (14) | 2 (4) |
| \$40,000–100,000 | 19 (39) | 15 (31) | 4 (8) |
| >\$100,000 | 9 (18) | 5 (10) | 4 (8) |
| Not reported | 12 (25) | 9 (18) | 3 (6) |
| Ethnicity, N (%) | | | |
| Caucasian | 30 (65) | 23 (47) | 7 (14) |
| Other | 8 (16) | 5 (10) | 3 (6) |
| Not reported | 11 (18) | 8 (16) | 3 (6) |
| BMI at heaviest, N (%) | | | |
| ≤39 kg/m ² | 10 (20) | 2 (4) | 8 (16) |
| 40–54 kg/m ² | 17 (35) | 16 (33) | 1 (2) |
| ≥55 kg/m ² | 11 (22) | 11 (22) | 0 (0) |
| Not reported | 11 (22) | 7 (14) | 4 (8) |
| BMI loss, N (%) | | | |
| ≤14 kg/m ² | 12 (24) | 4 (8) | 8 (16) |
| 15–24 kg/m ² | 16 (33) | 15 (31) | 1 (2) |
| ≥25 kg/m ² | 10 (20) | 10 (20) | 0 (0) |
| Not reported | 11 (22) | 7 (14) | 4 (8) |
| Body contouring procedures, N (%) | | | |
| Abdominoplasty | 45 (92) | 33 (67) | 12 (25) |
| Upper arm lift | 17 (35) | 15 (31) | 2 (4) |
| Breast lift/reduction | 18 (37) | 16 (33) | 2 (4) |
| Thigh lift | 12 (24) | 10 (20) | 2 (4) |
| Buttock lift | 8 (16) | 8 (16) | 0 (0) |
| Lower body lift | 6 (12) | 6 (12) | 0 (0) |

BMI = body mass index.

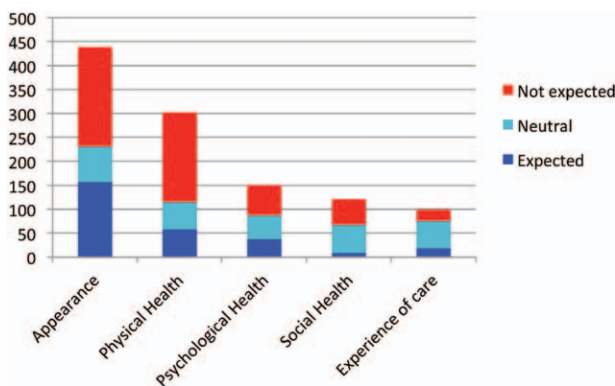


Fig. 1. Illustration of patient expectations according to health concepts.

For the bariatric surgery patients and in terms of weight loss, some participants did not lose as much weight as they had expected and/or did not expect to have to spend so much ongoing time on dietary issues to maintain their weight loss. For some of those who had excess skin, negative experiences (eg, symptoms such as rashes or perspiration) were not anticipated in advance. Those who had comorbid health conditions associated with obesity (eg, diabetes) expected such conditions to improve with weight loss, which often was the case.

In terms of physical function, most participants expected to increase their mobility and to engage in more physical activities after weight loss. Although

improvement was achieved to some extent, the unanticipated excess skin hindered participants from being able to be as mobile and active as expected. As participants explained, this fact created great disappointment.

After body contouring surgery, most participants were positively surprised to find that they were more mobile and could engage in physical activities (eg, run or cycle) beyond what they had expected. Even cosmetic patients stated that body contouring had physical benefits (eg, energy level) that were not anticipated. Furthermore, participants who experienced symptoms, such as rashes and perspiration, anticipated that body contouring surgery would reduce these.

Body contouring surgery was associated with a complex recovery that was a negative surprise for many participants. Immediately after surgery, participants did not expect the level of pain or discomfort they experienced and/or the impact surgery would have on mobility. Although participants reported that they knew about complications that could happen, they did not expect to experience them, nor for them to be as severe as they were. A few participants did not fully understand that body contouring is a major surgery that can potentially be life threatening. In addition, some participants did not feel well enough informed about the length of the recovery process and how hard it could be.

Psychological Health-Related Expectations

Participants described a range of ways in which both weight loss and/or body contouring affected their psychological health, including changes in body image, self-confidence, self-esteem, psychological well-being, and overall quality of life. Overall, for this category, participants tended to be positively surprised about their psychological health over the patient journey.

Bariatric surgery participants expected their psychological health and body image to improve after weight loss but did not anticipate the negative impact of excess skin. Because of the excess skin, body image was still a concern after weight loss.

It was not until after body contouring surgery was completed that expectations were met, eg, participants were more confident in themselves and their abilities, their self-esteem had improved, and they no longer loathed their body. For most participants, the psychological changes after body contouring surgery were not expected. For example, some participants described body contouring surgery to be life changing, because they had not expected to love themselves or to feel good about their body and/or their capacity to live life fully.

Social Health-Related Expectations

Expectations that participants described within this theme involved how people treated them, their relationships with friends and family, and dating and intimate relationships. Almost half of the codes within the social health-related expectations related to unmet expectations.

Participants reported that they had not expected to be treated differently by people, but found that they were. For example, during the obesity phase, participants described negative experiences (eg, feeling overlooked or not taken seriously by people), but after achieving their goals for their body, including both bariatric and body contouring surgery, they reported receiving new levels of respect. Many commented that their social life had improved more than expected; participants spoke of how they went out more or had more interactions with people, including family and friends. Most participants who talked about their relationship with a partner had positive expectations about how their weight loss and/or body contouring surgery might influence their relationship, including their sexual life. Conversely, it must be highlighted that some participants found that their partner had difficulty adapting to the changes in their appearance and HR-QOL. Some even described their partner as being jealous of their achievements, which they had not expected.

Patient Experience of Care

The main expectations for this theme involved patient information and relationship with their healthcare provider(s). Some participants were happy with the information that they had received, whereas others expressed disappointment and had expected more information, for example, about appearance after weight loss and body contouring surgery and what the recovery process would involve. It was of high importance that participants knew what to expect during the recovery period. For example, some participants did not know the possible long-term consequences of body contouring surgery, such as numbness or how extensive scarring would be. The participants' relationship with their healthcare provider(s) was also discussed mostly in terms of unmet expectations. For example, patients expected to be able to see and spend adequate time with their surgeon, which played an important role in their satisfaction with care.

DISCUSSION AND CONCLUSIONS

Bariatric and body contouring surgery have the potential to improve or restore a patient's body image and HR-QOL. Patients opting for these pro-

cedures need to be educated by their healthcare provider(s) to be fully prepared for what to expect. Our findings are useful in informing health care providers about areas where patient expectations need particular attention.

By using a qualitative approach, our team identified that patients have expectations for how their HR-QOL and appearance will change. These findings are in agreement with the earlier described study by Kitzinger et al,⁶ who reported that expectations of body contouring surgery included improved appearance, quality of life, and ability to be physically active, as well as alleviation of self-consciousness and reduced feelings of embarrassment. We found for some aspects of treatment and outcome, participants did not have clear expectations ahead of time. Furthermore, unmet expectations often contributed to postoperative dissatisfaction. Although participants described unmet expectations in all of our subthemes, the 2 areas that stood out the most in terms of expectations included the implications of weight loss and/or body contouring on appearance and on physical health, ie, recovery. For appearance, the excessive skin after weight loss and the body shape and size were what participants reported the most unmet expectations. Specifically, most participants did not expect to have as much excess skin as they had, nor how the excess skin would make them look and feel. Conversely, participants were not expecting to look as good as they did after body contouring, which was described as a huge benefit (psychological and socially) and positive surprise. Previous literature suggests that when patients are not sufficiently informed about the consequences of weight loss (both functional and according to appearance), it has the potential to negatively influence the quality of life.^{29–31} For recovery, the majority of participants did not expect it would take as long and/or be as hard as it was in reality. Unmet expectations represent areas where patient education is needed, and the above highlighted findings should be given thorough attention when informing patients preoperatively in the daily clinic.

Our study has some limitations. First, our interview guide was not focused exclusively on expectations because the goal was to develop a new PRO instrument. However, our sample size for a qualitative study was large,³² and many participants talked in detail about their expectations, which provided a rich descriptive qualitative data set. Second, our study involved patients in Canada and the United States, which limits generalizability to other countries.

A fuller understanding of outcomes and expectations for this patient population is needed to enhance patient education and improve shared medical decision making. Education materials should be informed by evidence-based PRO information. There are a range of PRO instruments developed for bariatric and body contouring surgery patients. Tayyem et al³³ performed a systematic review of HR-QOL measures in bariatric research and found that 42 different PRO instruments had been used to measure outcomes. In terms of body contouring, several reviews have been conducted,^{34–36} with the most up-to-date review identifying 3 body contouring-specific tools (all breast surgery). To address the lack of a PRO instrument that could be used to measure outcomes across the entire weight loss journey, starting at obesity and ending after body contouring surgery, our team developed the BODY-Q.²⁵ The BODY-Q measures appearance, HR-QOL, and experience of care in terms of 20 independently functioning scales.

As stated by Waljee et al,¹⁰ to properly measure patient expectations, a PRO scale measuring patient expectations is needed. Our team developed an expectation scale for cosmetic plastic surgery patients, which is being tested in body contouring surgery patients.³⁷ This scale asks patients how they think their appearance and life will change after surgery. Future research is needed to develop a similar expectations scale for obese and bariatric patients.

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